PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF AN INTERCONNECT SYSTEM ALONG MD 542 (LOCH RAVEN BOULEVARD) FROM HILLENDALE SHOPPING CENTER TO LOCH HILL ROAD AND INSTALLATION OF AUDIBLE PEDESTRIAN PUSHBUTTONS AT DEANWOOD RD/ GLENDALE RD AND HILLENDALE SHOPPING CENTER/LOCH RAVEN SHOPPING CENTER INTERSECTIONS. IN BALTIMORE COUNTY, MARYLAND. MD 542 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL REMAIN THE SAME AT EACH INTERSECTION, EXCEPT FOR DEANWOOD RD./GLENDALE RD. INTERSECTION WHERE AN ALTERNATE PEDESTRIAN PHASE WILL BE ADDED ACROSS THE EAST LEG.

CONTROLLER REQUIREMENTS

THE EXISTING POLE MOUNTED CABINET AND CONTROLLER SHALL BE USED AT LOCH HILL ROAD, GOUCHER BLVD. AND HILLENDALE SHOPPING CENTER/LOCH RAVEN SHOPPING CENTER ENTRANCE INTERSECTIONS. SEE SIGNAL PLANS FOR CONTROLLER MODIFICATIONS. A NEW BASE MOUNTED CABINET AND CONTROLLER WITH SYSTEM PACKAGE AND FIVE FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIERS SHALL BE INSTALLED AT DEANWOOD RD/ GLENDALE RD INTERSECTION.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-13 (LEFT-TURN BAY CLOSURE)
STANDARD NO. MD-104.04-15 (INTERSECTION TURN BAY/LANE CLOSURE)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781/2785

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 321-2761

MS. SUENETTE POPE
DISTRICT UTILITY ENGINEER
PHONE: (410) 321-2841

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	3 EACH	QUICK CONNECT BLOCK AND HARNESS FOR TELEMETRY PANEL I/O PANEL
9000	4 EACH	8 FT. FIBER GLASS DIRECT BURIAL POLE
9016	5 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9571	5 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 6 EACH R10-4(1) SIGN (9 IN. x 12 IN.) - POLE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET AT DEANWOOD RD/ GLENDALE RD INTERSECTIONS.

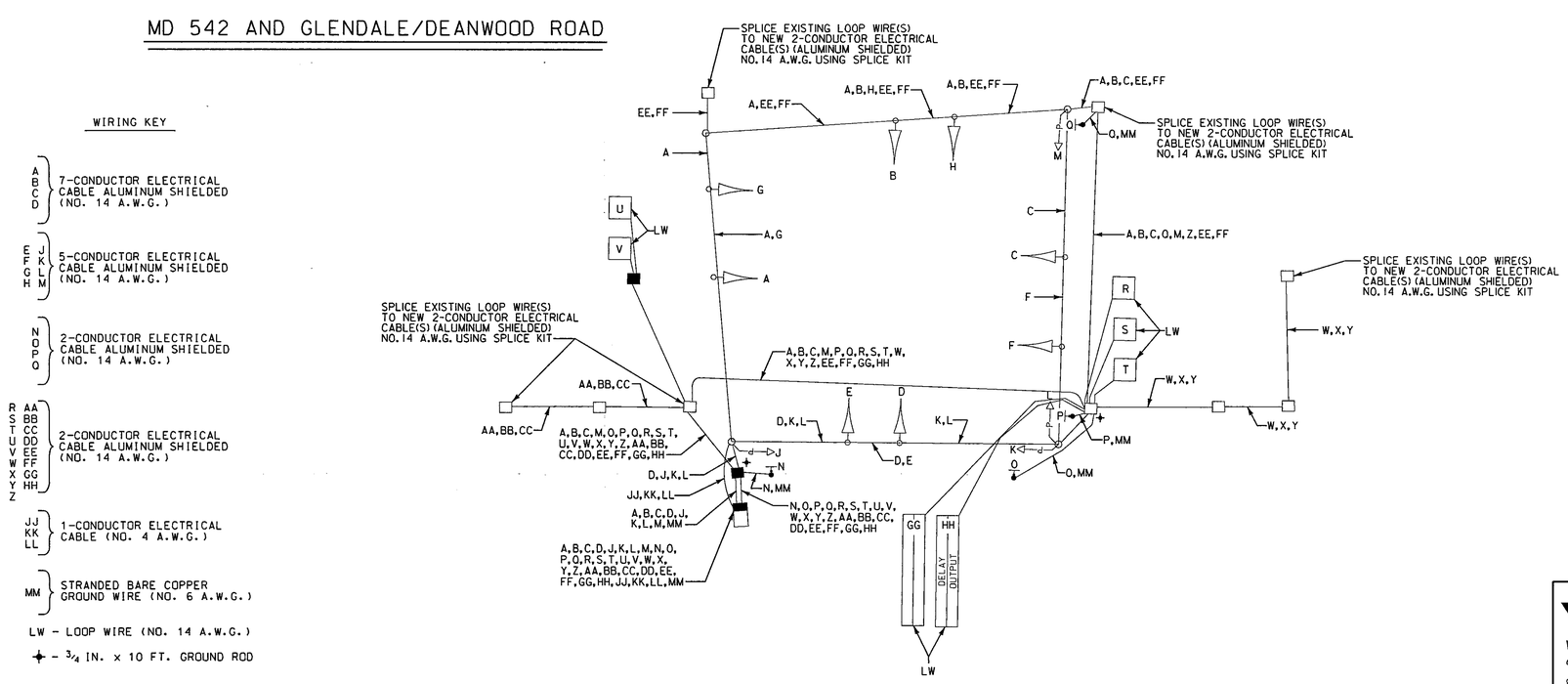
EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EACH	MAINTENANCE OF TRAFFIC
2002	10 C.Y.	TEST PIT EXCAVATION
6004	230 S.F.	4 IN. CONCRETE SIDEWALK
8001	2 C.Y.	CONCRETE FOUNDATION
8003	3 EACH	3/4 IN. TO 3 IN. BLIND COUPLING WELDED AND GALVANIZED
8019	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT AS PER ASSIGNMENT
8031	95 L.F.	NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8037	430 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8039	55 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8040	1800 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8041	80 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8043	1760 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8044	300 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8045	30 L.F.	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR WIRE SLEEVE
8048	80 L.F.	ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 A.W.G - THHN/THWN
8054	24 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8057	5 S.F.	INSTALL OVERHEAD SIGN
8070	6000 L.F.	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE, JELLY-FILLED (UNDERGROUND)
8075	2 EACH	GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
8082	5800 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8083	950 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G)
8085	1000 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G)
8086	1600 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G)
8088	1700 L.F.	LOOP WIRE ENCASED IN 1/4 INCH FLEXIBLE TUBING (NO. 14 A.W.G)
8089	485 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8096	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
NEG.	6 EACH	FURNISH AND INSTALL POLARO 2-WIRE NAVIGATOR AUDIBLE PEDESTRIAN SIGNAL WITH 9"x12" SIGN, BLACK FACE PLATE OPTION 'A' AND BRAILLE TEXT
NEG.	2 EACH	FURNISH AND INSTALL CENTRAL CONTROL UNIT
NEG.	4 EACH	INSTALL FIBERGLASS PED POLE

WIRING DIAGRAM

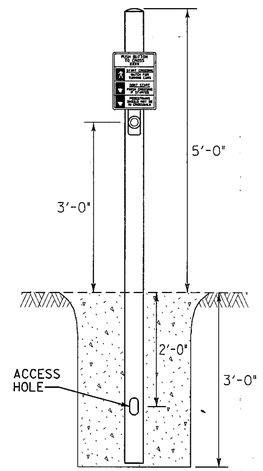
MD 542 AND GLENDALE/DEANWOOD ROAD



COMPOSITE PEDESTRIAN POLE DETAIL

GENERAL NOTES:

1. DIG OR AUGER A HOLE OF CORRECT SIZE AND DEPTH. THE HOLE SHOULD BE SEVERAL INCHES LARGER IN DIAMETER THAN THE POLE SHAFT. IN POOR SOIL, THE DIAMETER OF THE HOLE SHOULD BE A MINIMUM OF DOUBLE THE DIAMETER OF THE POLE.
2. CHECK THE HOLE DEPTH CAREFULLY AND TAMP IN BACKFILL IF NECESSARY TO INSURE THE CORRECT POLE SETTING DEPTH.
3. ADD 6 IN. TO 9 IN. OF BACKFILL AND PLUMB THE POLE. SIGHT IN LINE FROM A PLUMB BOB TO THE POLE FROM A CONVENIENT DISTANCE. SIGHT FROM TWO LOCATIONS APPROXIMATELY 90° TO EACH OTHER. STRAIGHTEN THE POLE AS NEEDED AND TAMP BACKFILL AROUND THE BASE. CONTINUE TO BACKFILL AND THOROUGHLY TAMP AT NO MORE THAN 9 IN. INTERVALS TO THE BOTTOM OF THE CABLE ENTRANCE. FREQUENT, FIRM TAMPING OF THE BACKFILL DURING INSTALLATION IS VERY IMPORTANT TO INSURE A SUCCESSFUL INSTALLATION. TO INSURE PLUMBNESS, THE POLE SHOULD BE CHECKED WITH A PLUMB BOB WHILE TAPPING.



IC-4

REVISION NO.1
CONTRACT NO. AT5665185
INSTALL AUDIBLE PED SIGNALS AT GLENDALE RD/DEANWOOD RD AND HILLENDALE/LOCH RAVEN PLAZA SHOPPING CENTER INTERSECTIONS

WR&A
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801 South Caroline Street
Baltimore, Maryland 21231
(410) 235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 542 (LOCH RAVEN BLVD) FROM HILLENDALE SHOPPING CTR TO LOCH HILL RD

DRAWN BY:	B. DONOWAY	F.A.P. NO.	AC-CMG-STPG-0005(986)E	TS NO.	SHEET NO.
CHECKED BY:	N. LEARY	S.H.A. NO.	AT5665185		
SCALE:	NONE	COUNTY:	BALTIMORE	T.I.M.S. NO.	5 OF 5
DATE:	11/29/2004	LOG MILE:		F841	

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